1: Cooper E-4 (no date) 1946 SHS Tehuelche SHS

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FIGURE 32.—Tehuelche arms and instruments. a, Bolas and stirrup; b, bolas; c, shield; d, spears; e, bolas with spears; f, ax; g, scraper; h, musical bow; i, arrows; j, grooved tube; k, bola pouches; l, pipe. (After Bibora, 1871, opposite p. 192.)

323 **Pottery.**—The early *Tehuelche* used very simple and crude pottery (Figuerón, 1908, 1:80), and pottery occurs archaeologically far down the Atlantic coast and inland in *Tehuelche* territory (present volume, p. 39; Lothrop, 1932 b, pp. 194–196); but again there is no information on process of manufacture. Fitz-Roy (1839, 2:172) reported pottery absent from the *Tehuelche* of his day.

281 325 **Miscellaneous.**—The *Tehuelche* did excellent bone plaiting and saddlery work, and, after the early 19th century, very creditable silversmithing (Medin, 1917, p. 214; Bourne, 1893, p. 97, cf. 96).

281 **Skin dressing.**—In dressing skins, the women first pegged them down to sun-dry them, then scraped them with flint, agate, obsidian, or glass scrapers. The scrapers (fig. 16, *f*) are hafted by lashing the blade to a bent split sapling (cf. illustr., Orbigny and Brunh, 1910, p. 121) or by setting it transversely in a block of wood. The skins were next smeared with grease and liver, were kneaded into a pulp, and were softened by hand until quite pliable. A soft-grained stone was also used for scouring. In sewing, an eyeless needle or awl, later made of an iron nail, and thread of guanaco or rhea sinew were used. (On *Tehuelche* skin dressing, cf.: Lothrop, 1932; Bourne, 1893, pp. 96–99; Guinnard, 1864, pp. 68–69; Beneagli, 1894, p. 776; Hatcher, 1903, p. 338. Our most detailed account is Kerman, 1905, pp. 209–210, for "Pampa" Indians apparently of Río Negro, probably including *Tehuelche*; he records debairing with adze.)

[413] [483] 485 412 **Skin bags** were made for holding water (Coan, 1886, p. 33; Gardiner and Hunt, 1852, p. 89; Bourne, 1893, p. 99), paints, etc. Knives were earlier made of stone, and such were still used in the middle 19th century (Sánchez Labrador, 1936, p. 73). A small hand-adz was used in woodworking (fig. 18, *f*; cf. Musters, 1871, pp. 108, 170).

411 **Weapons.**—The chief hunting and fighting weapon of the early *Tehuelche* was the bow and arrow, which finally went out of use in the first half of the 19th century (Morrell, 1832, p. 64; Fitz-Roy, 1839, 2:149). The bows are described both as long and as short, with guanaco sinew string; arrows, with cane shafts, heads of stone or bone, and three feathers (Oviedo, 1851–55, 2: 40), carried originally in the hair, fillet headdress, or belt instead of a quiver. D'Orbigny (1835–47, 2:116–117) reported bows 3 feet (90 cm.) long, some use of skin quivers, and slings. The bolas, of the one-, two-, and three-balled type (fig. 18, *i*, *j*, *k*), began to replace the bow and arrow at the time of the adoption of the horse. The lasso, too, was of later introduction.

The lasso, bola perdida, European weapons, and armor are discussed below, pp. 152–154.

372 **Fire making.**—Ordinarily fire was made by the drill method. Fire making by percussion is recorded by two observers, Coan (1886, p. 30) with two pebbles and Spegazzini (1884, p. 288) with two flints—the former case possibly due to immigrant *Ona* influence (cf. supra).

2: Musters T-5 (1869-1870)1873
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with a bodkin, and sewn to the hide with sinew. The 326
anvils and hammers for working silver are generally stone [413]
implements; flints, however, are only used by the men for
procuring fire. The Tehuelches are also very handy workers
in iron, and will fashion a knife, or even an adze, out of any
piece of metal procured by theft, commerce in the colonies,
or from wrecks on the coast. One of the knives frequently
used in the latter part of my journey was formed out of one
blade of an old pair of scissors forged for me by Hinchel.

Their tools for working silver, iron, wood, &c., consist of 412
files, known by the expressive name of 'Khikerikikh,' or per-
haps a rasp, an occasional saw, an axe, the inevitable small
adze (fig. 6), a pair of scissors, or an old chisel. Many of these
have been obtained from shipwrecks on the coast, others by
barter in the settlements.

The women's most important occupation in camp was the 462
making up of skin mantles, which merits a full description.

The skins are first dried in the sun, being pegged down 281
with thorns of the algarroba tree. When dry they are taken 294
up, and scraped with pieces of flint, agate, obsidian, or some-
times glass, fixed into a branch naturally bent so as to form a
handle (fig. 7). They are then smeared over with grease and
liver kneaded into pulp, after which they are softened in the
hand until quite pliable, when they are placed on the ground
and cut with a small, very sharp knife into pieces, dovetailed
so as to fit one into the other, in order to secure strength of
seam, and parcelled out amongst a party of four or six 442
women, with a corresponding quantity of needles and thread, 283]
consisting of bodkins formed out of sharpened nails, and
dried sinews from the back of the adult guanaco. A whole
mantle is never sewn together at once, but when one half is
finished it is pegged out and the paint applied to it thus.
The surface is slightly damped, and each woman takes a cake 294
or piece of red ochre, if the ground is to be red, and, keeping 531
it damp, lays the paint on with great care. When the
ground is finished, the pattern of small black spots and blue

4: Lothrop A-4 (no date) 1929
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hand until quite pliable, when they are placed on the ground and cut with a small, very sharp knife [fig. 5] into pieces, dovetailed so as to fit one into the other [fig. 6], in order to secure strength of seam, and parcelled out amongst a party of four or six women, with corresponding quantity of needles and thread, consisting of bodkins formed out of sharpened nails, and dried sinews from the back of the adult guanaco. A whole mantle is never sewn together at once, but when half is finished it is pegged out and the paint applied to it thus. The surface is slightly damped, and each woman takes a cake or piece of red ochre, if the ground is to be red, and, keeping it damp, lays the paint on with great care. When the ground is finished, the pattern of small black spots and blue and yellow lines is painted with the greatest exactness, the women working all day with the most assiduous industry. When completed it is left for a night to dry, and the other half and wings which serve in lieu of sleeves, are duly completed, and subsequently all are joined together, presenting, when finished, an unbroken surface of fur. The favorite pattern (except when the wearer is in mourning) is a red ground with small black crosses and blue and yellow longitudinal lines for borders, or a zigzag of white, blue, and red. The untiring energy with which the women work, and the rapidity with which they sew are astonishing. When a man is married, his wife, or wives, of course manufacture his mantles, assisted by their friends, whom they help in their turn; but should he be a bachelor, as in my unfortunate case, he gives out his skins to a fair lady, who works like other people I have heard of—on half-profits, and the hunter generally loses by the bargain; at least such was my experience, some thirty or forty skins only producing a mantle containing about a third of their number.

FIG. 4—Tehuelche flesher. (After Oates and Bruch)

Bourne's account of mantle-making differs in detail from that of Musters, so we quote it also in full.

The skins of young guanacos are selected for mantles, on account of the superior fineness and softness of the hair. Nearly a dozen skins are used for a single mantle, as a large part of each is esteemed unfit for use, and thrown away. The skins, while green, are stretched to their utmost tension on the ground to dry. When partially dried, they are scraped on the inside with a stone sharpened like a gun-flint, sprinkled the while with water, to facilitate the operation. When the surface is made tolerably smooth, and of a pretty uniform thickness, it is actively scoured with a coarse-grained stone, till it has a bright polish. When the skin is again dried, then crumpled and twisted in the hands till it becomes perfectly soft and pliable. The thread, as has been stated, is made from the sinews of

4: Lothrop A-4 (no date) 1929
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the ostrich. They are extracted by the exertion of great strength, and divided into strings about the size of an ordinary shoe-thread. They are then twisted, the ends are scraped to a point, and when dry become stiff; they are now ready for use.

Two pieces of skin are cut to fit each other. The tailoress (for all the work, from the curing of the skins to the last results, is done by the squaws) holds the edges together with the left hand, and drills them for sewing with a sharpened nail, held between the first two fingers of the right hand; the pointed thread, held between the finger and thumb, is inserted and drawn through, and so the work goes on. The stitches are tolerably fine, and a very neat seam is made. Other pieces are added, and when the whole is finished the seams are rubbed smooth with a bone. The fur being worn inside, there remains the work of outside decoration. With a due quantity of clay, blood, charcoal and grease, amalgamated for the purpose, the artist arms herself with a stick for a brush, and executes divers figures in black, on a red ground; which, if intended to show forth men, require a vigorous imagination to detect the purpose. They might pass for unhappy ghosts (if a little more ethereal in composition), *or* for deformed trees. They bear a rude resemblance to a chair in profile, or a figure 4: and are thickly disposed over the whole surface, in the attitude sometimes vulgarly termed "spoon-fashion." The garments are now complete; the edges are carefully trimmed with a knife, and the fabric is thrown over the shoulders, with the infallible certainty of fitting as closely as the native taste requires. . . .

Certain comments may be made on the two descriptions of robe-making just quoted. In the first place, the tools enumerated are well known archeologically, and most of them have been illustrated by Outes (1905). Scrapers sometimes were hafted by setting them transversely in a block of wood and securing them with resin.[14] More often the handle consisted of a split sapling, bent until the ends met, with the blade secured between them by lashings (fig. 4). Snub-nose scrapers, intended for use without hafting, are found throughout Patagonia, but not in great quantities.

Knife-blades are found all over Patagonia. However, the series we illustrate in fig. 5, *a–d*, come from the region where the cloaks here described were obtained. Of these *b* is a single triangular flake, retouched along the edges; *a* is a symmetrical elongate blade which

[14] Outes (1905, p. 339) states that this hafting is of Araucanian origin, taken over by the Tehuelche. The use of transversely hafted scrapers by the Ona of Tierra del Fuego, however, suggests that the culture transference may have been from the Tehuelche to the Araucanians.

4: Lothrop A-4 (no date) 1929
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has been worked all over; *c* is a lanceolate blade, again worked all over. While not rare, none of these forms is common. An apparently unique knife is seen in *d*—a form probably derived from some European prototype. The great majority of blades (fig. 5,

a *b* *c* *d* *e* *f*

FIG. 5.—Tehuelche knife-blades. *a–d*, Rio Gallegos basin (Hamilton collection); *e*, Gulf of San Jorge; *f*, Sierras Coloradas (after Outes)

e, *f*) are of somewhat irregular shape, sometimes one- and sometimes two-edged, in type merging imperceptibly into the scraper class. On the Tehuelche manner of hafting stone knife-blades we have no information.

Bourne's account of preparing skins describes the scouring of hides with a coarse-grained stone. In the John Hamilton collection at Gallegos, which we had the privilege of inspecting, were a number of accurately cut rectangular blocks of porous lava about six inches long by two to three inches wide and thick, which might well have been used for this purpose. Outes[10] describes and illustrates stone discs about three inches in diameter and an inch in thickness which may have been similarly employed.

Tehuelche "needles," used in the sewing, were not true needles with an eye, but simply awls. As among most primitive people, formerly they were of bone, particularly the leg-bones of birds, but in recent years the Tehuelche have used a nail or some piece of scrap-iron.

As for the pigments employed to decorate Tehuelche cloaks, they were applied mixed with blood or with grease to a slightly dampened surface. Musters[11] writes that the grease was obtained from the

[10] 1905, figs. 194, 195.
[11] 1871, p. 172.

4: Lothrop A-4 (no date) 1929
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stum of boiled marrow-bones, and he states that red paint was ochre, black paint an earth, and white paint a gypsum. Bourne[10] says that black was obtained from charcoal, as was the practice among both Fuegian and Canoe Indians in Tierra del Fuego. No information is available about yellow, blue, and green pigments. We suspect that the green is always of European origin and has replaced blue, frequently mentioned by early travelers but not found on the Museum's specimens, which, by the way, illustrate the use of both native and European pigments. On the methods of applying paints, we have the statement of Bourne that a stick was used for a brush. The Tehuelche made small hair-brushes by binding together a bundle of slender roots,[11] but apparently never used paint brushes. However, it must be remembered that a stick makes a good brush if the pulp has been removed by chewing so that a fibrous end remains.[12] Certainly Tehuelche patterns have been applied with a neatness and precision perhaps not fully appreciable on existing specimens because the colors have run in the rain.[13]

Assemblage of skins we illustrate in fig. 6. This mantle contains twelve skins, placed alternately head to foot, as will be seen if the picture is reversed. From side to side there are five complete rows, two head-up and three head-down, while the sides contain skins which have been split into halves longitudinally. The result of thus piecing together the skins is an alternation of color, the white bellies and the *café au lait* backs of the guanaco succeeding each other in turn. Such robes have considerable commercial value today, and we have been told that more than half a million guanaco-skins were shipped from Patagonia in 1924.

Coming now to an examination of the painted patterns, preliminary inspection shows that the decorated surface habitually is divided into

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[10] Ubi supra.

[11] One of these is illustrated by Oates and Beach, fig. 118.

[12] See Orchard, W. C., Fine-line Decoration of Southwestern Pottery, *Indian Notes*, vol. II, no. 1, 1925.

[13] The colors in pls. LXV and LXVI have been made more intense than on the weather-stained original specimens. The following color-scheme is employed in our line-drawings.

Red Yellow Green Blue Black

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Two pieces of skin are cut to fit each other. The tailoress (for all the work, from the curing of the skins to the last results, is done by the squaws) holds the edges together with the left hand, and drills them for sewing with a sharpened nail, held between the first two fingers of the right hand; the pointed thread, held between the finger and thumb, is inserted and drawn through, and so the work goes on. The stitches are tolerably fine, and a very neat seam is made. Other pieces are added, and when the whole is finished the seams are rubbed smooth with a bone. The fur being worn inside, there remains the work of outside decoration. With a due quantity of clay, blood, charcoal and grease, amalgamated for the purpose, the artist arms herself with a stick for a brush, and executes divers figures in black, on a red ground; which if intended to shadow forth men, require a vigorous imagination to detect the purpose. They might pass for unhappy ghosts (if a little more ethereal in composition), or for deformed trees. They bear a rude resemblance to a chair in profile, or a figure 4; and are thickly disposed over the whole surface, in the attitude sometimes vulgarly termed "spoon-fashion." The garment is now complete; the edges are carefully trimmed with a knife, and the fabric is thrown over the shoulders, with the infallible certainty of fitting as closely as the native tastes require. There is no trial of patience in smoothing obstinate wrinkles. A "genteel fit" is the easiest thing in the world; wherein Patagonian tailors have decidedly the advantage of their fellow-craftsmen in civilised lands.

5: Bourne T-5 (1849)1874
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757 [413] left them and drew from their repository of tools a sharpened nail fixed in a wooden handle, like an awl. The chief stretched himself on the ground, face downwards; a surgical operation was plainly impending. What could the matter be? Had the chief, in the excess of his plumpness, burst open, like ripe fruit, requiring to be sewed up? I drew my head from beneath the protection I had provided against the smoke, and rose on my knees, to get a better view; the huge, black, greasy monster lay extended at his full length, his wife pinched up the skin on his back, pierced it with her awl, and continued the process till a number of perforations were made, from which the blood oozed slowly. I asked the meaning of this operation, and was told by the chief that he had pains in his back, for which this was the best *remedy*. Blood-letting, it seemed, is no monopoly of the faculty. I told him that in my country we applied, in such cases, a liquid called opodeldoc, an infallible *remedy*, and promised to procure him some when we got to Holland. This was henceforth added to my list of inducements.

264 The old fellow righted himself, and leaned against one of the pillars of his palace; one of his partners pulled up the toasting-fork, and jerked the half-roasted and more than sufficiently smoked meat upon the ground, seized the knife which the boys had been playing with, and cut the mess into liberal pieces, which were thrown broadcast on either side. The chief's appetite did not appear to be affected either by his indisposition or by the extraordinary remedy applied; his portion of the *cárne* disappeared behind his great white teeth with a haste that seemed to involve no waste.